Fig. 1

DETECTOR 20

INFORMATIION PROCESSOR

100 — COMPONENT REGISTRATOR

101 — COMPONENT DETECTOR ← SCREEN CHANGE DETECTOR — 108

102 — COMPONENT LOCATION DETECTOR ← WINDOW LOCATION DETECTOR — 104

103 — OVERLAP DETECTOR ←

105 — VISIBLE REGION DETERMINOR ←

106 — VISIBLE REGION TABLE MANAGER

DETERMINOR 30

107 — DISPLAY EFFECTOR

Fig. 2

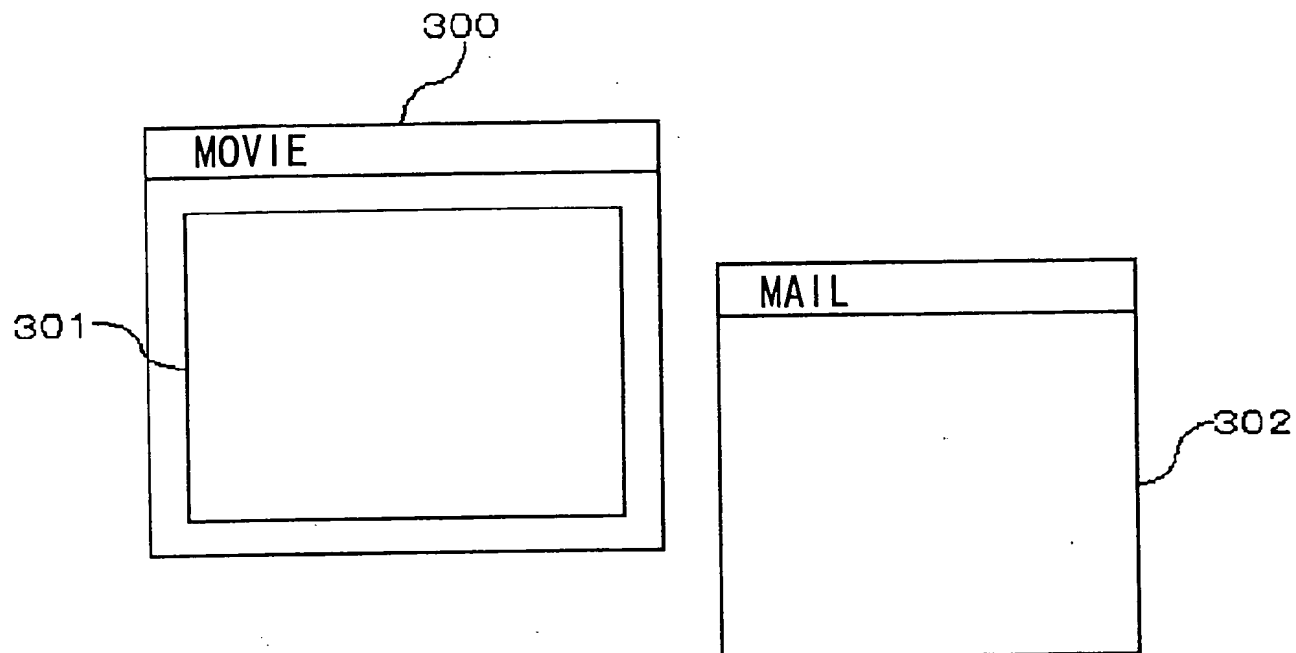| KIND	PARENT WINDOW
Medium	MOVIE
Network	>|<

Fig. 3

300

MOVIE

301

MAIL

302

Fig. 4

WINDOW ID	WINDOW	UPPERMOST LEFT END POINT	LOWERMOST RIGHT END POINT	Z-ORDER
1	MOVIE	(x3, y3)	(x4, y4)	2
2	MAIL	(x5, y5)	(x6, y6)	1

Fig. 5

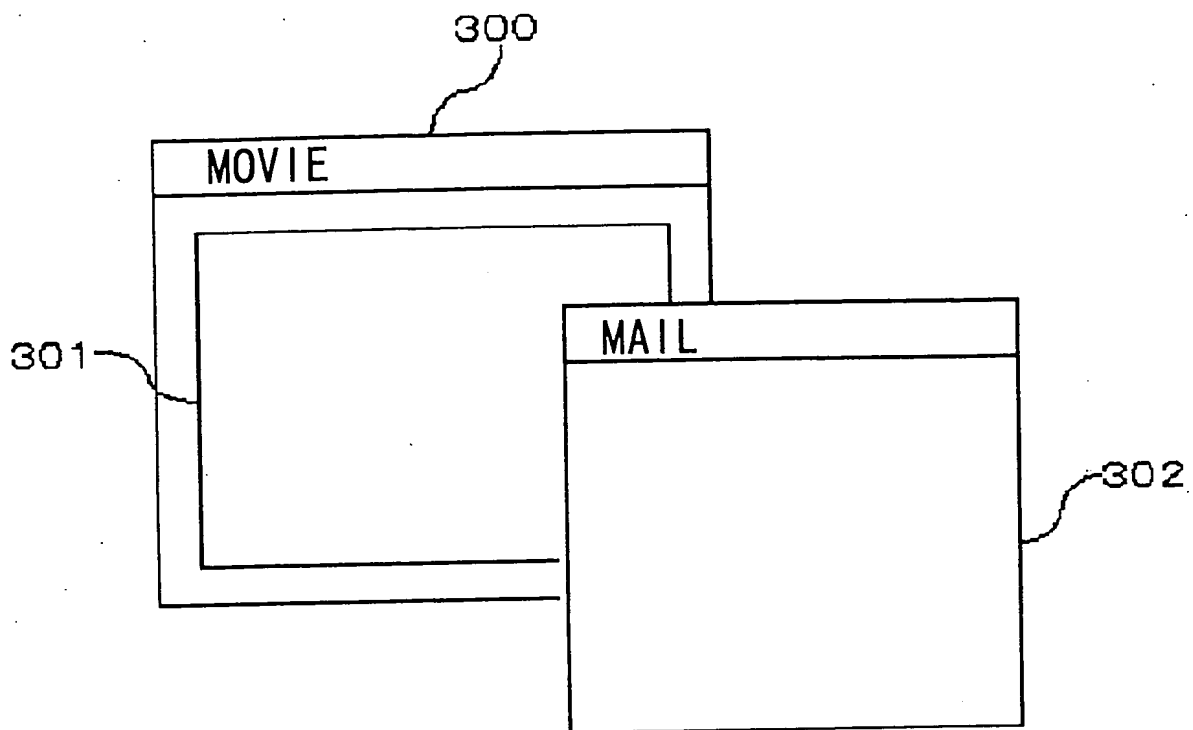| COMPONENT ID	KIND	WINDOW ID	UPPERMOST LEFT END POINT	LOWERMOST RIGHT END POINT
1	Medium	1	(x1, y1)	(x2, y2)

Fig. 6

300

MOVIE

301

MAIL

302

Fig. 7

COMPONENT ID	WINDOW ID
...	...
	...
p	q
	...
...	...

Fig. 8

COMPONENT ID	WINDOW ID
1	4
2	3
	5

Fig. 9

COMPONENT ID	WINDOW ID
1	2

Fig. 10
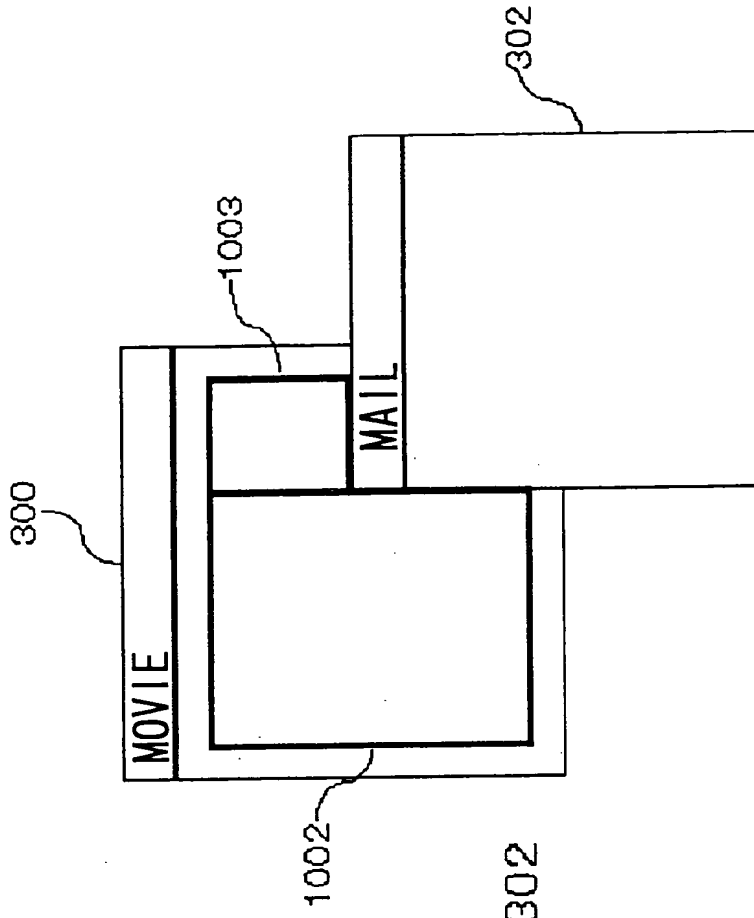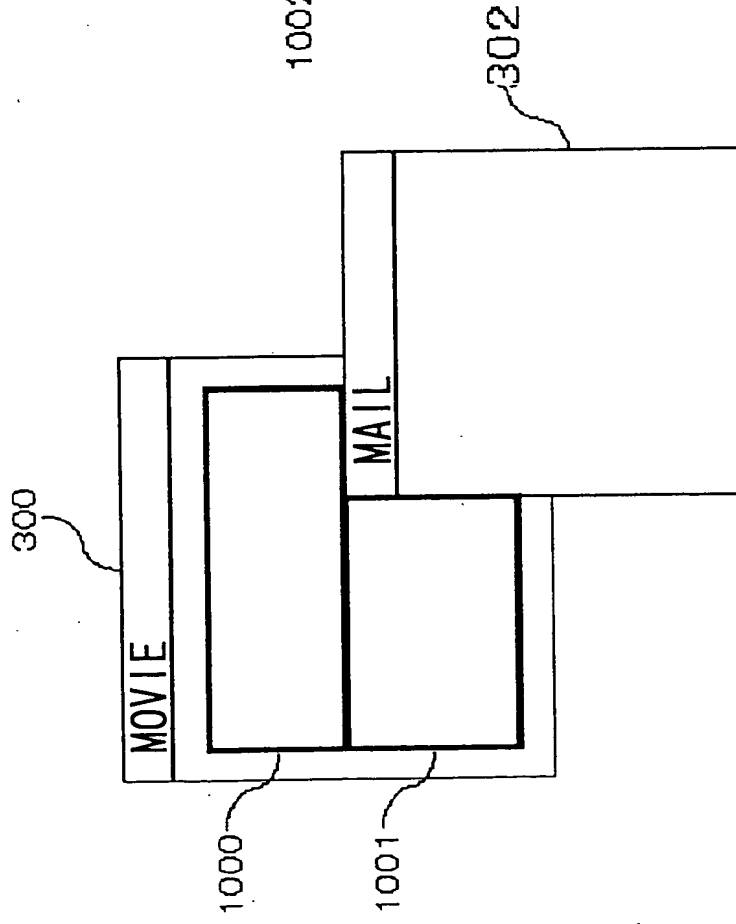
Fig. 11(b)

Fig. 11(a)

COMPONENT ID	VISIBLE REGION	
	UPPERMOST LEFT END POINT	LOWERMOST RIGHT END POINT
1	(x7, y7)	(x8, y8)
	(x7, y8)	(x9, y9)

Fig. 12

301

1200
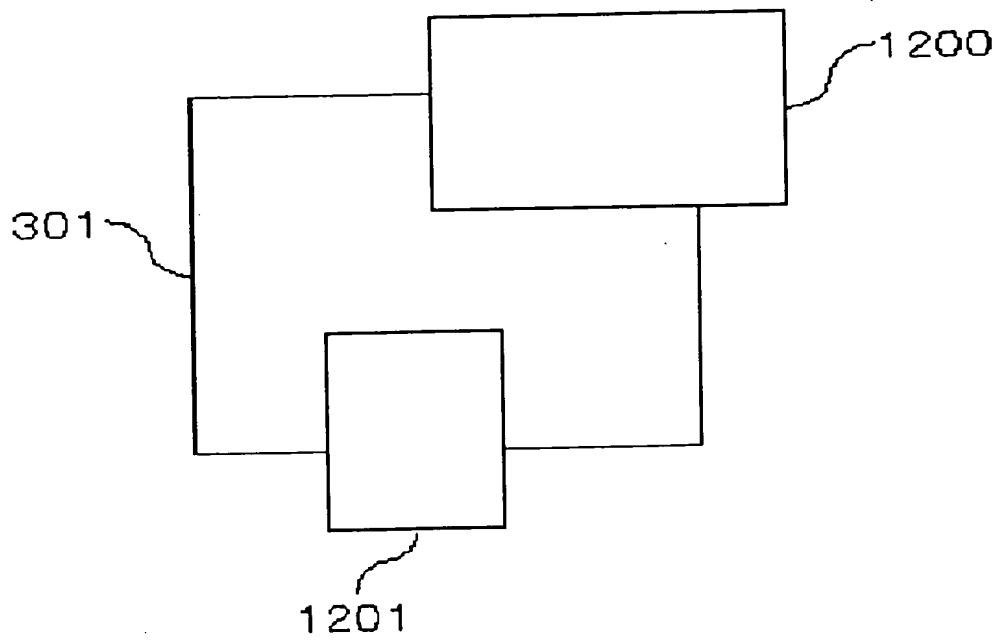
1201

Fig. 13

1300

1200

1301

1302

1201

1303
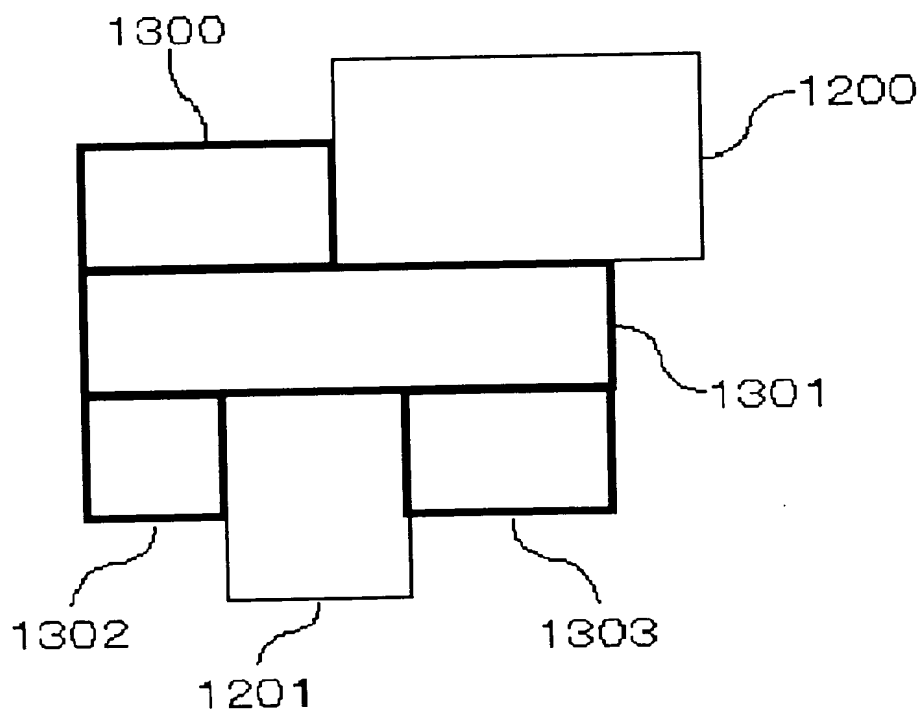
Fig. 14

COMPONENT ID	VISIBLE REGION	
	UPPERMOST LEFT END POINT	LOWERMOST RIGHT END POINT
1	(x10, y10)	(x11, y11)
	(x10, y11)	(x13, y12)
	(x10, y12)	(x11, y13)
	(x12, y12)	(x13, y13)

Fig. 15

1500

301

1501

Fig. 16

1500

1600

1603

1601

1604

1602

1501
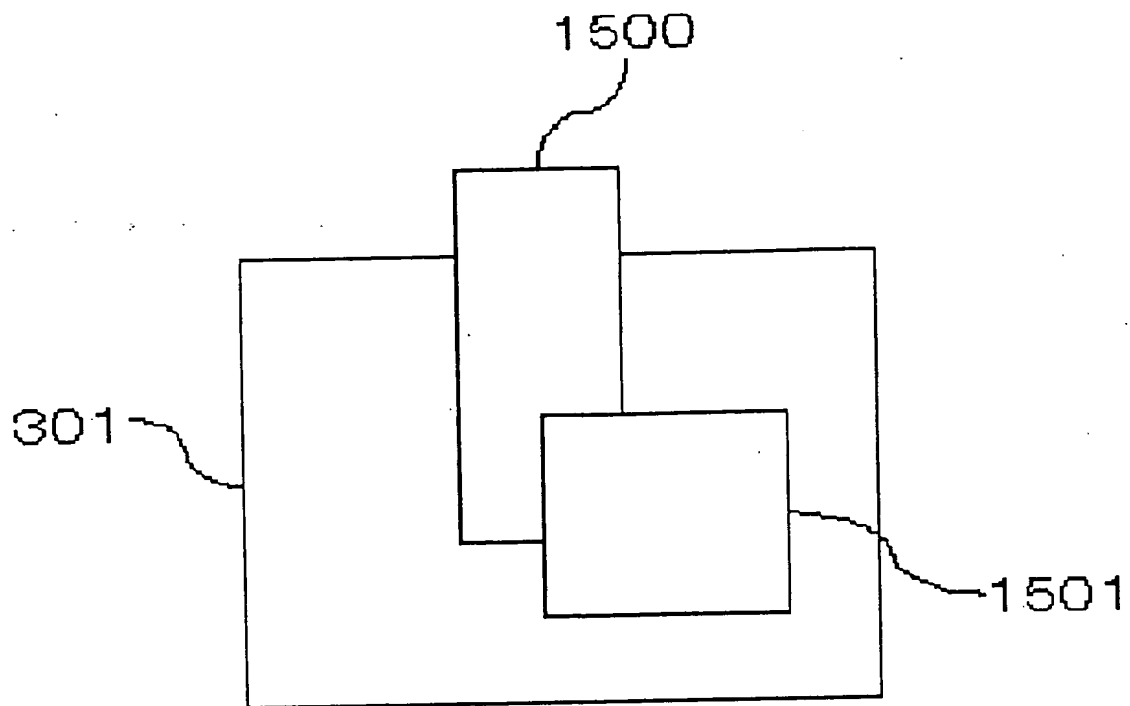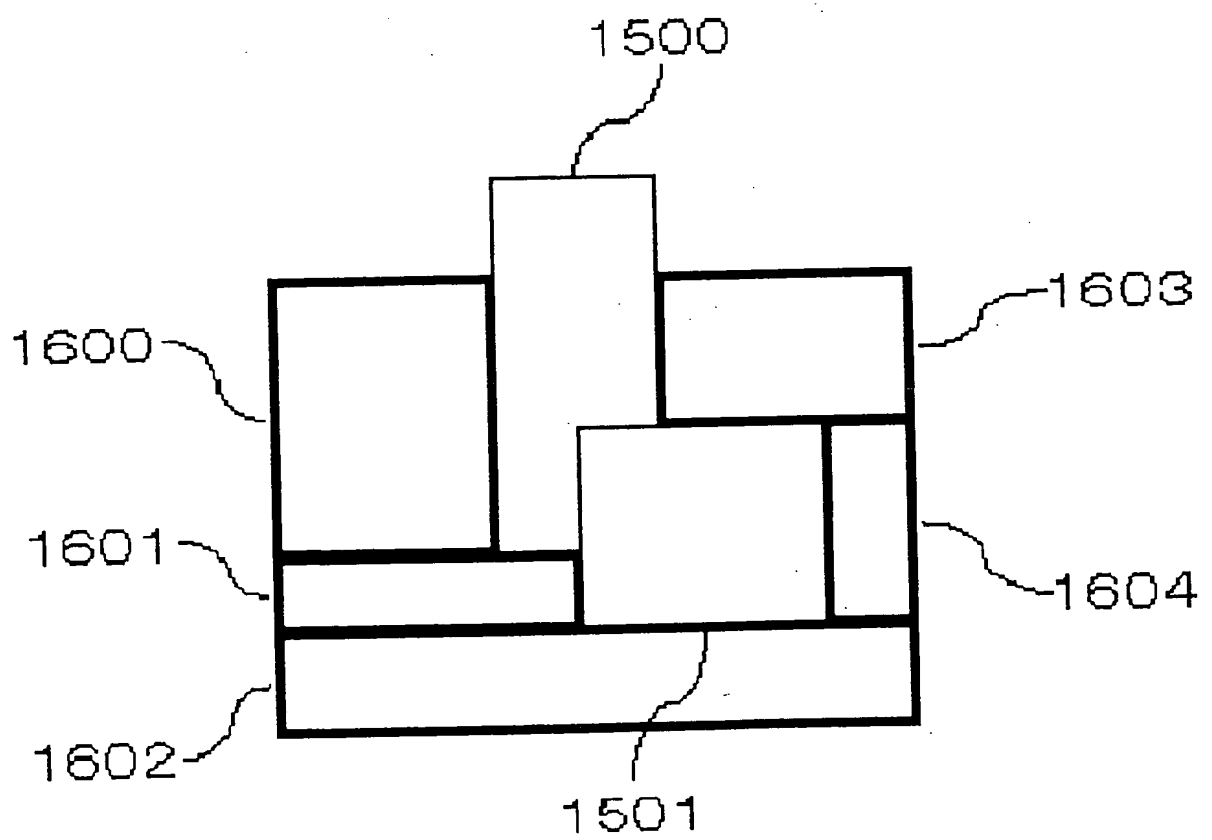
Fig. 17

COMPONENT ID	VISIBLE REGION	
	UPPERMOST LEFT END POINT	LOWERMOST RIGHT END POINT
...	...	...
...	...	...
P	(s, t)	(u, w)
...	...	...
...	...	...

Fig. 18

START

DETECT COMPONENT
PREPARE WINDOW LOCATION TABLE
PREPARE COMPONENT LOCATION TABLE
— S1

PREPARE OVERLAP TABLE — S2

DETERMINE VISIBLE
REGION — S3

PREPARE VISIBLE
REGION TABLE — S4

SELECT PICTURE EFFECT
AND APPLICATION RANGE — S5

PICTURE EFFECT
PROCESSING — S6

END

Fig. 19

START

T1 DETECT SCREEN CHANGE? — NO

YES

T2 KIND OF SCREEN CHANGE?

T3 NEW WINDOW
UPDATE WINDOW LOCATION TABLE UPDATE COMPONENT LOCATION TABLE IF NECESSARY

T5 CLOSE WINDOW

T6 WINDOW INCLUDES COMPONENT? — NO

YES

T4 COMPONENT STILL EXISTS?

YES

T7

T8 MOVEMENT OR CHANGE IN SIZE OF WINDOW
T9 UPDATE WINDOW LOCATION TABLE UPDATE COMPONENT LOCATION TABLE IF NECESSARY

T10 CHANGE IN WINDOW FRONT-BACK RELATIONSHIP
T11 UPDATE WINDOW LOCATION TABLE

S2

Fig. 20